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EDUCATION:

- Ph.D., Computer Science & Engineering, University of Washington** Expected June 2012
Information Economics in the Age of e-Commerce
Advised by Anna Karlin and Yuval Peres
- M.S., Computer Science & Engineering, University of Washington** August 2009
Local Dynamics and Balanced Outcomes in Exchange Networks
Advised by Anna Karlin and Yuval Peres
- M.S., Mathematics, University of Washington** June 2008
Bias in the Indegree Distribution in a Snowball Sample of a Large Random Network
Advised by Abraham Flaxman and Christopher Hoffman
- B.S., Computer Science and Mathematics** May 2006
with Honors, Harvey Mudd College

RESEARCH INTERESTS:

I am interested in solving problems which lie in the intersection of algorithms, game theory, and probability. I focus on theoretical results which have real impact in practice, specifically with applications to internet economics, mechanism design and social networks. My research interests include display advertising, information exchange markets, local dynamics in exchange networks, bayesian learning on networks, information acquisition and aggregation, and balls & bins hashing. My thesis is motivated by the recent influx of information on the web and how information affects our assumptions and models; it addresses how we should approach mechanism design in this new landscape of e-Commerce using techniques from algorithms, game theory, probability, and economics.

PUBLICATIONS:

- Dominant Strategy Mechanisms for Deliberative Agents: Characterization and Approximation by SPPs**, *Submitted*. With Anna Karlin, Kevin Leyton-Brown, Thach Nguyen and David Thompson.
- Buy-it-now or Take-a-chance: A Mechanism for Real-Time Price Discrimination**, *Submitted*. With Gregory Lewis, Markus M. Mobius and Hamid Nazerzadeh.
- Balls and Bins: Smaller Hash Families and Faster Evaluation**. *Foundations of Computer Science (FOCS)*, October 2011. With Omer Reingold, Gil Segev and Udi Wieder.
- Buy-it-Now or Take-a-Chance: A Simple Sequential Screening Mechanism**, *Int. World Wide Web Conference (WWW)*, 2011. With Gregory Lewis, Markus Mobius and Hamid Nazerzadeh.
- Local Dynamics in Exchange Networks via Random Turn Games**, *Workshop in Network Economics (WINE)*, 2010. With Nikhil Devanur and Yuval Peres.
- Convergence of Local Dynamics to Balanced Outcomes in Exchange Networks**, *Foundations of Computer Science (FOCS)*, October 2009. With Yossi Azar, Benjamin Birnbaum, Nikhil Devanur and Yuval Peres.

Traffic Grooming for Single-Source Multicast Communication in WDM Rings, *IEEE International Conference on Communications (ICC)*, May 2005. With Dave Buchfuhrer, Timothy Carnes, Ran Libeskind-Hadas and Brian Tagiku.

PATENTS:

Buy-it-Now or Take-a-Chance, Patent No: M1103.70931US00, filed in 2010. With Gregory Lewis, Markus M. Mobius, Hamid Nazerzadeh and Lee Zen.

HONORS:

Awarded the Yahoo! Key Scientific Challenges (KSC) Prize	2011
Fellowship , UW Engineering Graduate Fellowship	2010-2011
Fellowship , National Physical Science Consortium	2007-2009
Fellowship , Graduate Opportunity Program Award	2006-2007
Dean's List , Harvey Mudd College	2002-2006

INTERNSHIPS:

Internship , Yahoo! Research, Silicon Valley	Summer 2011
Internship , Microsoft Research, Silicon Valley	Winter 2011
Internship , Microsoft Research, New England	Summer 2010
Business Guest , Microsoft Research, Redmond, Theory Group	Summer 2008

INVITATIONS:

Talk , China Theory Week	October, 2011
Visitor , IAS Hebrew University, Group on Algorithmic Game Theory	Spring 2011
Talk , Research on Algorithms for the Internet (RAIN) Seminar, Stanford	March 2011
Talk , Search Seminar, Microsoft Research Silicon Valley	February 2011
Talk , Inst. for Operations Research and Management Sciences (INFORMS)	October 2009
Talk , Random Structures and Algorithms Conference, Poznan, Poland	August 2009

TEACHING AND SERVICE:

Instructor , Learn to Scratch, UW Robinson Center Summer Challenge	July 2011
Instructor , Algorithms and Complexity, Computer Science, UW	Jan 2010-Mar 2010
Visit Day Coordinator , Computer Science Department, UW	Jan 2009-April 2010
Instructor , Catherine Blaine Middle School Math Olympiad Team	Sept 2007 - May 2008
Teaching Assistant/Counselor , Summer Institute in Mathematics at UW	2006, 2007
Tutor , Academic Excellence Program, Harvey Mudd College	Jan 2005 - May 2006

REFERENCES: Letters available upon request.